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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| EXAMINER |
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AL HASHEMI, SANA A

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| ART UNIT | PAPER NUMBER |
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2171

DATE MAILED: 12/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

TS

Office Action Summary

Application No.

09/823,238

Applicant(s)

FEDERWISCH, MICHAEL

Examiner

Sana Al-Hashemi

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 October 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-9,11-14,17-21,23-25,28-31 and 33-35 is/are pending in the application.
- 4a) Of the above claim(s) 2,3,10,15,16,22,26,27 and 32 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4-9,11-14,17-21,23-25,28-31 and 33-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claims Status: claims 1, 4-9, 11-14, 17-21, 23-25, 28-31, 33-35 are rejected, Claims 2, 3, 10, 15, 16, 22, 26, 27, and 32, are cancelled.

Applicant's arguments with respect to claims 1, 4-9, 11-14, 17-21, 23-25, 28-31, 33-35 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 4-8, 11-14, 17-20, 23-25, 28-30, 33-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kleiman et al. (US 2001/0044807).

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1. Regarding Claims 1, 14, 25, and 35, Kleiman discloses a method of propagating data, comprising:

mirroring the data from a first filer to a second filer (see paragraph [0008], [0024], Kleiman); and

mirroring the data from the second filer to a third filer (see Fig. 1, box 114, paragraph [0025], [0027], Kleiman);

wherein snapshots are used in mirroring the data, the data is organized in one or more volumes on the filers, one or more of the volumes are mirrored, and the first filer uses softlocks to mark snapshots needed for mirroring volumes from the first filer. (see Fig. 2, paragraph [0041], Kleiman).

2. Regarding Claims 4, 6, 7, 17, 19, and 28, Kleiman disclose a method wherein deletion of a snapshot marked with a softlock is prevented (see paragraph [0043] Kleiman¹).

3. Regarding Claims 5, 18, and 29, Kleiman discloses a method wherein entry of a release command to the first filer informs the first filer that the second filer will no longer mirror the volume from the first filer, and wherein the softlocks are updated to indicate that any snapshot corresponding to the volume can be deleted (see paragraph [0138] Kleiman).

4. Regarding Claims 8, 20, and 30, Kleiman discloses a method wherein entry of a release command to the second filer informs the second filer that the third filer will no longer mirror the volume from the second filer, and wherein the softlocks are updated to indicate that any snapshot corresponding to the volume can be deleted.

¹ Examiner interprets the steps of saving copied data as preventing the deletion of that data.

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5. Regarding Claims 11, 12, 13, 23, and 33, Kleiman discloses a method wherein the second filer also mirrors one or more volumes from a fourth filer (see paragraph [0139], Kleiman).
6. Regarding Claim 24, Kleiman discloses a memory wherein the memory includes RAM, ROM, a disk, or a CD-ROM (see paragraph [0022], Kleiman).
7. Regarding Claim 34, Kleiman discloses a filer wherein the file system utilizes a write anywhere file system layout implemented on a redundant array of inexpensive disks (see paragraph [0021], Kleiman).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9, 21, and 31, are rejected under 35 U.S.C. 103(a) as being unpatentable over Kleiman et al. (US 2001/0044807) in view of Raz et al. (US Patent No. 5,852,715).

8. Regarding Claims 9, 21, and 31, Kleiman discloses all the limitations subject matter except the step of using the jump ahead protection is used during mirroring operations, said jump ahead protection preventing activation of a snapshot of a volume while mirroring the volume to another filer. Examiner notes that it was notoriously well known in the art to provide a protection when updating or mirroring data as cited by Raz et al. (see column 6, lines 39-67, Raz). It would have been obvious to one of ordinary skill in the art at the time of the invention to use a

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protection, like that of Raz et al., when copying files with the motivation of protecting the data from corruption and making sure that all the data have been copied.

Response to Amendment

Applicant argues that the applied reference fails to disclose the “the first filer [using] softlocks to mark snapshots needed for mirroring volumes from the first filer.”

Examiner disagrees. The softlock is interpreted by the examiner as the indicator used to mark the snapshots in Kleiman. Since the applicant has not provided any specific description in the specification for the softlock, and Kleiman discloses the indicator to mark snapshots to be copied, then the Kleiman indicator meets the claimed “softlock” feature.

Applicant argues that the applied reference fails to disclose the step of jump ahead protection during mirroring.

Examiner responds, that it was well known in the art to use a protection during copying data as a safety feature and to make sure all the data had been copied and no data is lost if the files were accessible to a user during the mirroring, Examiner presents Raz et al. (US Patent No. 5,852,715) which teaches this feature.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Other Prior Art Made of Record

1. Kleiman et al (US Pub. No. US 2001/0044807) disclose a file system image transfer.
2. Mcbrearty et al. (US Patent No. 6,216,211) discloses a method and apparatus for accessing mirrored logical volumes.
3. Bobbitt et al. (US Pub. No. 2003/0115218A1) discloses virtual file system.
4. Van Hoff et al. (US Patent No. 6,272,536) discloses a system and method for the distribution of code and data.

Points of Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to: Sana Al-Hashemi whose telephone number is (703) 305-4881. The examiner can normally be reached on Monday - Friday from 8:00 AM to 4:30 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic, can be reached on (703) 308-1436. Any response to this office action should be mailed to: The Commissioner of Patents and Trademarks, Washington, D.C. 20231. Or telefax at phone number (703) 872-9306. For formal or draft communications, please label "PROPOSED" or "DRAFT". Hand-delivered response should be brought to Crystal Park II, 2121 Crystal Drive, 6th Floor Receptionist, Arlington, Virginia. 22202.

Sana Al-Hashemi
Patent Examiner
Technology Center 2100
November 24, 2003



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